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AMSAT NEWS SERVICE
ANS-056

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

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SB SAT @ AMSAT $ANS-056.01
AMSAT-DC Meeting and Space Seminar Coming March 24

AMSAT News Service Bulletin 056.01
 >From AMSAT HQ SILVER SPRING, MD.
February 25, 2007
To All RADIO AMATEURS
BID: $ANS-056.01

Are you near Washington, D.C. or know someone who is? Then YOU ARE HEREBY INVITED to the next AMSAT-DC Meeting and Space Seminar. The day-long event will be held on Saturday, March 24 near BWI airport.

Get the meeting announcement at
http://www.amsat.org/amsat-new/fieldops/eventDetail.php?eID=259
and share it with others.

In building our agenda, we are lining up one or two presentations from local folks who are building a CubeSat of all things! We'll take a close look at the brand new AMSAT lab on our eastern shore. Get news on a new S-Band beacon. Lots more will be offered too.

Please forward this event announcement to one who might like to know about it. Take it to a club meeting. Announce it on a net. Gosh, tell a high school or college student -- and an instructor too. All are invited.

[ANS thanks Pat, N8PK, AMSAT-DC Co-host for the above information]

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SB SAT @ AMSAT $ANS-056.02
Call for Papers

AMSAT News Service Bulletin 056.02

>From AMSAT HQ SILVER SPRING, MD.
February 25, 2007
To All RADIO AMATEURS
BID: $ANS-056.02

Call for Papers
11th Annual Southeastern VHF Society Conference
April 27th and 28th, 2007
Atlanta, Georgia

The Southeastern VHF Society is calling for the submission of papers and presentations for the upcoming 11th Annual Southeastern VHF Society Conference to be held in Atlanta, Georgia on April 27th and 28th, 2007. Papers and presentations are solicited on both the technical and operational aspects of VHF, UHF and Microwave weak signal amateur radio.

In general papers and presentations on non weak signal related topics such as FM repeaters and packet will not be accepted but exceptions may be made if the topic is related to weak signal. For example, a paper or presentation on the use of APRS to track rovers during contests would be considered.

The deadline for the submission of papers and presentations is March 2, 2007. All submissions should be in Microsoft Word (.doc) or alternatively Adobe Acrobat (.pdf) files. Pages are 8 and 1/2 by 11 inches with a 1 inch margin on the bottom and ? inch margin on the other three sides. All text, drawings, photos, etc. should be black and white only (no color). Please indicate when you submit your paper or presentation if you plan to attend the conference and present there or if you are submitting just for publication. Papers and presentations will be published in bound proceedings by the ARRL. Send all questions, comments and submissions to the technical program chair, Jim Worsham, W4KXY at w4kxy@bellsouth.net. For further information about the conference please go to www.svhfs.org.

[ANS thanks Gould, WA4SXM for the above information]

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SB SAT @ AMSAT $ANS-056.03
AMSAT Journal Vol 30 #1

AMSAT News Service Bulletin 056.03
>From AMSAT HQ SILVER SPRING, MD.
February 25, 2007
To All RADIO AMATEURS
BID: $ANS-056.03

The newest edition of the AMSAT Journal is now out in the mail to everyone. Quietly, Ed Long, WA4SWJ, Editor has produced the 30th edition of this fine publication. Included this month are articles and updated information on the Phase 3 E bird and Eagle. A great article on AO-51 and what it takes to actually receive any signals from this Bird. All AMSAT-NA members receive this publication as part of membership. Visit the AMSAT-NA website to find out more about becoming a member to help support satellite building and operational activities. Ed long deserves applause for another great edition of the AMSAT Journal and a tireless effort to keep us informed. Keep him well fed in articles and projects as required.

[ANS thanks (from) Ed Long, WA4SWJ, for the above information]

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SB SAT @ AMSAT $ANS-056.04
Passing of an Old Friend

AMSAT News Service Bulletin 056.04
 >From AMSAT HQ SILVER SPRING, MD.
February 25, 2007
To All RADIO AMATEURS
BID: $ANS-056.04

As of February 23, 2007, Our Old Friend "morse code" has now slipped into history as a requirement for a U.S. Amateur License. The tones and burps in the lower portions of the HF bands will become more and more silent as those that remember CW start to become silent keys themselves.
"Silent Key" will go by the wayside as well. As a longtime Extra, I can honestly say that getting up to speed was an excitement all its own.
Just 5 WPM for my Novice was a thrill learning those mysterious tones. I for one, can certainly see it both as a defunct digital mode and a unique mode to operate pulling out a QSO from those melodius tones. Ditty dum dum ditty will have a narrower meaning from this time on.

[ANS thanks Dee, NB2F for the above insight]

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SB SAT @ AMSAT $ANS-056.05
ARISS Status Report for the Week of February 20, 2007

AMSAT News Service Bulletin 056.05
 >From AMSAT HQ SILVER SPRING, MD.
February 25, 2007
To All RADIO AMATEURS
BID: $ANS-056.05

Amateur Radio on the International Space Station (ARISS) Status Report
February 20, 2007

1. Hanazono Elementary School Contact Successful

On Monday, February 12, children attending Hanazono Elementary School in Akashi-city, Japan experienced an Amateur Radio on the International Space Station (ARISS) contact. Twelve students were able to have twenty questions answered by Sunita Williams, KD5PLB in front of an audience of approximately 200 students, teachers and parents. The local government newspaper and the local television station covered the event.

The American Radio Relay League ran an article on the contact entitled, ï¿½Fresh Food Doesn't Last Long on ISS, Astronaut Tells Youngsters via Ham Radio.ï¿½
See: http://www.arrl.org/news/stories/2007/02/14/101/?nc=1

2. Upcoming School Contacts

The Vasant Valley School in Vasant Kunj, New Delhi, India has been approved for an Amateur Radio on the International Space Station (ARISS) contact on Saturday, February 24 at 08:50 UTC, via the telebridge station WH6PN in Hawaii. The school is organizing a workshop on amateur radio and its applications for the students of classes VI to XII. The CBSE (Central Board of Secondary Education) introduced a new curriculum on Emergency Disaster Management for Class X students. It has a chapter on ï¿½Alternative Communication Systemsï¿½ which includes ham radio. Amateur Radio licensing programs will be provided for training students and

teachers, and there are plans for an amateur radio club station to be set up at the school. Students will participate in essay contests and poster competitions, and the press will be invited to the event. The audio from this contact will be fed into the EchoLink AMSAT (101 377) and JK1ZRW (277 208) servers, as well as into the IRLP Discovery Reflector 9010.
Vasant Valley School is very excited to have this opportunity to speak with Sunita Williams, KD5PLB, and has invited all students, teachers and parents of Delhi schools to attend the event. It has announced the contact on its website. See:
http://www.vasantvalley.org/vasantvalley/sunitawilliams.htm
Kalpana Chawlaï¿½s niece & nephew, Megha and Udais, attend Vasant Valley School, which is a Sunita Williams crew pick.

Escola Camilo Castelo Branco in Carnaxide, Portugal has been approved for an Amateur Radio on the International Space Station (ARISS) contact on Monday, February 26 at 15:51 UTC via the telebridge station VK5ZAI in Australia. The high school students have a curriculum which includes Physics, Chemistry and Philosophy. One of the main goals of this project is to study current scientific and technological development. Many of these students will continue their studies at the university, choosing areas related to aerospace engineering and taking with them new knowledge from this event.
The audio from this contact will be fed into the EchoLink AMSAT (101 377) and JK1ZRW (277 208) servers, as well as into the IRLP Discovery Reflector 9010.

Virginia Run Elementary School in Centreville, Virginia has been slated for an Amateur Radio on the International Space Station (ARISS) contact on Friday, March 2 at 16:18 UTC. This contact is a Suni Williams, KD5PLB crew pick.

3. Boulder Hill School Prepares for Contact

An Amateur Radio on the International Space Station (ARISS) contact is tentatively planned for Boulder Hill Elementary School in Montgomery, Illinois during the week of March 5. The schoolï¿½s radio club has been busy preparing for the contact. Students have built Morse code transmitters and crystal radio receivers. They have spoken to other hams over the radio and have been studying for their amateur radio license exams. A press release was posted to both the Beacon News and Elgin Courier News websites. See:
http://www.suburbanchicagonews.com:80/beaconnews/news/248818,2_1_AU08_SPACE_S1.article

and
http://www.suburbanchicagonews.com/couriernews/news/250269,3_1_EL09_A3RADIO_S1.article

4. ARRL Article on ISS Crew Hams

The American Radio Relay League (ARRL) ran an article on the crews assigned to the International Space Station over the next two years, many of whom hold their amateur radio licenses. See:
http://www.arrl.org/news/stories/2007/02/13/101/?nc=1

[ANS thanks Carol, KB3LKI for the above information]

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SB SAT @ AMSAT $ANS-056.06
Satellite Shorts From All Over

AMSAT News Service Bulletin 056.06

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 >From AMSAT HQ SILVER SPRING, MD.
February 25, 2007
To All RADIO AMATEURS
BID: $ANS-056.06

+ The Southern Africa Amateur Radio Satellite Association (SA AMSAT)
    will be holding its annual space communications conference in Gauteng
    on Saturday 23 June 2007. South Africaï¿½s latest satellite project
    SumbandilaSat which is planned for launch in June and carries Amateur
    Radio Equipment. For more information about the conference visit
    http://www.amsatsa.org.za.

+ AMSAT-UK reminds everyone the dates for the 2007 AMSAT-UK Colloquium
    are 20 through 22 July 2007. We are holding it a week earlier than
    normal to avoid clashing with the Central States VHF Event. Venue is
    to be the University of Surrey, as per previous years.
    Details of the colloquium can be found at: http://www.uk.amsat.org.

+ Planning has started for the October 2007 AMSAT-NA Space symposium
    which will be held in Pittsburgh this year.  More details are coming
    soon.

+ Paul, 2E1EUB plans portable satellite operations from northeastern
    Scotland (grid IO86ok) for nine days starting on March 3. He wil be
    using the callsign 2M1EUB/P; QSL via home call.  Operation will in-
    clude AO-7 for those in North America and all of the satellites for
    European coverage.

+ The University of New South Wales in Australia is building BlueSat
    which will include amateur radio frequencies.  More information about
    this project is on-line at: http://www.bluesat.unsw.edu.au.

+ A recording has been put on-line for those wishing to hear the RAFT
    satellite speak. http://www.ne.jp/asahi/hamradio/je9pel/70223raf.wav
    RAFT is speaking, "This is JE9PEL via RAFT".  (Thanks Mineo, JE9PEL)

[ANS thanks everyone for the above information]

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In addition to regular membership, AMSAT offers membership in the
President's Club. Members of the President's Club, as sustaining donors
to AMSAT Project Funds, will be eligible to receive additional benefits.
Application forms are available from the AMSAT Office.


73,
This week's ANS Editor,
Dee Interdonato, NB2F


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ADDITIONAL COMPONENT BULLETINS RECOVERED FROM OTHER POSTS
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SB SAT @ AMSAT $ANS-056.07
AO-51 Schedule Change to Support Falconsat-3 Testing

AMSAT News Service Bulletin 056.07
From AMSAT HQ SILVER SPRING, MD.
February 25, 2007
To All RADIO AMATEURS
BID: $ANS-056.07
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The AMSAT AO-51 Operations Team has released this schedule change:

February 26 and possibly February 27 during the local AM passes over Colorado the AO-51 U band voice transmitter will be off and the S band will be on in digital mode at 38k4 and 78k4. These mode changes are to facilitate the testing of the US Air Force Academy satellite ground station in preparation for the launch of Falconsat-3.

Falconsat-3 (FS-3) is another in the series of satellites built at the US Air Force Academy. It is presently scheduled to launch March 8 from Cape Canaveral on an Atlas-V (mission STP-01). USAFA Space Systems Research Center satellites are science oriented and university class.

FS-3 carries two space weather plasma detection experiments along with a micro pulse plasma thruster attitude control experiment. The objectives of the program are to do real science and educate USAFA cadets about space systems design, construction, testing, and operations. About 40 senior cadets are in the program each year. Falconsats are operated from the ground station at USAFA near Colorado Springs, Colorado.

Once in orbit FS-3's mission is to collect data from its experiments and provide cadets in the Space Operations major an actual space ops experience. Additionally Astronautics major cadets will analyze telemetry and make operations decisions. FS-3 will perform its primary mission on DOD frequencies with a downlink at 2.220 GHz. Modulation is GMSK at 38k4 or 76k8 bps. All transmissions are in the clear and are AX.25. Additionally FS-3 carries an Amateur transmitter and receiver with a downlink at 435.100 Mhz. Modulation is GMSK at 9k6 with faster bit rates available. The Amateur uplink is in VHF and the frequency will be made available when FS-3 reverts to Amateur mode.

After the primary science mission is completed the satellite will be transferred to the USAFA Amateur Radio Club and operated as an Amateur satellite. It can function much like AO-51 in either an FM voice or digital store and forward configurations. During the first few weeks on orbit FS-3 will be commissioned, which includes uploading software and testing all functions. During that time the Amateur payload will be exercised.

The primary avionics in FS-3 are from SpaceQuest with additional modules built by cadets and faculty at USAFA and contractors. Software modules are from BekTek, SSTL, and Colorado Satellite Services, with additional software by cadets and faculty at USAFA. The satellite is 'ESPA class'. The basic structure is a cube about 24" on a side. There is a 3 meter gravity gradient boom that will be extended from the 'top' on orbit. On the 'bottom' are the pulse plasma thrusters and various antennas including an array of S band patch antennas provided by S&L Technologies of Orlando along with omni antennas for S, V and U bands.

The USAFA ground station consists of two complete units with individual masts on the roof of the classroom annex building. Antennas include 6' and 10' dishes and Yagis. Rotators are the heavy duty MT-3000 and MT-1000 from M2.

The first USAFA satellite, Falcon Gold, went into GTO and measured the strength of GPS signals from well above the constellation. The results showed signal levels were adequate to warrant further experiments and in part lead to the GPS experiment on AO-40 and other satellites. Falconsat 4 and 5 are in the design stages now. Each is expected to

carry an Amateur transmitter and receiver in addition to their primary payloads.

After launch reception reports will be appreciated. Reports may be sent to: fs3reports@coloradosatellite.com

[ANS thanks Jim White, WD0E and the AO-51 Operations Team for the above information.]

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